EMULEX®

Generations Ahead

8Gb/s Fibre Channel
PCI Express 2.0 Host Bus Adapters

Unparalleled manageability, reliability, performance and ease of deployment

Streamlined installation and management, unrivaled scalability, and industry-leading virtualization support make the single-channel Emulex LightPulse LPe12000 and dual-channel LPe12002 Fibre Channel host bus adapters (HBA) ideal solutions for enterprise, mixed-OS and virtual server environments. With powerful management capabilities and broad platform support, they deliver maximum performance in the broadest range of applications and environments.

Proven design, architecture and interface

Emulex LightPulse HBAs' highly integrated processor design minimized onboard components to improve host performance and efficiency. Advanced error-checking features ensure the integrity of block data as it traverses the SAN. Emulex's firmware-based architecture enables feature and performance upgrades without costly hardware changes. The unique Service Level Interface (SLI™) allows use of a common driver across all models of Emulex HBAs on a given OS platform. Installation and management facilities are designed to minimize server reboots and further simplify deployment.

8Gb/s
EXCELLENCE IN THE ENTERPRISE

KEY BENEFITS

- Provides superior performance for the enterprise
- Integrates seamlessly into existing SANs
- Supports IT server consolidation and energy conservation initiatives
- Allows application of SAN best practices, tools and processes with virtual server deployments
- Protects sensitive data from unauthorized access
- Assures data availability and data integrity
- Improves IT staff productivity through simplified deployment and management

KEY FEATURES

- Support for Message Signaled Interrupts eXtended (MSI-X), improves host utilization & enhances application performance
- Support for 8Gb/s, 4Gb/s & 2Gb/s Fibre Channel devices
- Comprehensive virtualization capabilities with support for N-Port ID Virtualization (NPIV) and Virtual Fabric
- Host to Fabric FC-SP authentication
- BlockGuard® ready - ensures end-to-end data integrity
- Common driver model allows a single driver to support all Emulex HBAs on a given OS
- Easy deployment of new firmware with minimal server reboots
- Efficient centralized administration of Emulex HBAs via powerful management tools
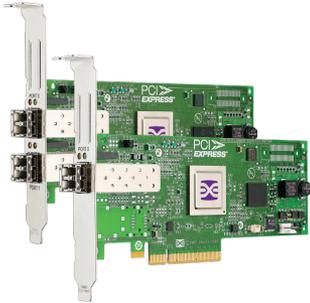
Specifications

Standards

· ANSI Fibre Channel: FC-PI-4, FC-FS-2, FC-FS-2/AM1, FC-LS, FC-AL-2, FC-GS-6, FC-FLA, FC-PLDA, FC-TAPE, FC-DA, FCP through FCP-4, SBC-3, FC-SP, FC-HBA and SMI-S v1.1

· PCI Express base spec 2.0

· PCI Express card electromechanical spec 2.0

· Fibre Channel class 2 and 3

· PHP hot plug-hot swap

Architecture

· Single-channel (LPe12000) or dual-channel (LPe12002)

· 8Gb/s, 4Gb/s or 2Gb/s FC Link speeds automatically detected

· Integrated data buffer and code space memory

Comprehensive OS Support

· Windows, Linux, NetWare, Solaris, VMware

· Additional support is available from OEMs and partners

Hardware Environments

· PowerPC,® SPARC,® x86, x64 and Intel® Itanium® 64-bit processor family

Optical

· Data rates: 2.125, 4.25 and 8.5Gb/s (auto-detected)

· Optics: Short wave lasers with LC type connector

· Cable: Operating at 8Gb/s

  - 50/125µm (500MHz*km BW)-up to 50m

  - 50/125µm (2000MHz*km BW)-up to 150m

Physical Dimensions

· Short, low profile MD2 form factor card

· 167.64mm x 68.91mm (6.60" x 2.71")

· Standard bracket (low profile available)

Power & Environmental Requirements

· Volts: +3.3, +12

· Operating temperature: 0° to 55°C (32° to 131°F)

· Storage temperature: -40° to 70°C (-40° to 158°F)

· Relative humidity: 5% to 95% non-condensing

· 23 degree C wet bulb

Agency Approvals

· Class 1 Laser Product per DHHS 21CFR (J) and EN60825-1

· UL recognized to UL 60950-1

· CUR recognized to CSA22.2, No. 60950-1-03

· Baurt-certified to EN60950-1

· FCC Rules, Part 15, Class A

· ICES-003, Class A

· EMC Directive 2004/108/EEC (CE Mark)

  - EN55022, Class A

  - EN55024

· Australian EMC Framework (C-Tick Mark)

  - AS/NZS CISPR22, Class A

· VCCI (Japan), Class A

· MIC (Korea), Class A

· BSMI (Taiwan), Class A

· EU RoHS Compliant (Directive 2002/95/EC)

· China RoHS Compliant

Ordering Information

· **LPe12000-M8**

  - Single-channel, multi-mode optic interface

· **LPe12002-M8**

  - Dual-channel, multi-mode optic interface

Additional Features

· Performance Features

  - Doubling the maximum Fibre Channel link rate from 4Gb/s to 8Gb/s and enhanced virtualization capabilities help support IT "Green" initiatives

  - Frame-level Multiplexing and out-of-order frame reassembly increases link efficiency and maximizes HBA performance.

· Data Protection Features

  - End-to-end data protection with hardware parity, CRC, ECC and other advanced error checking and correcting algorithms ensure data is safe from corruption.

· Deployment and Management Features

  - Universal Boot capability allows the appropriate boot environment to be automatically selected for any given hardware.

  - Boot from SAN capability reduces system management costs and increases uptime.

  - Detailed real-time event logging and tracing enables quick diagnosis of SAN problems.

  - Beaconing feature flashes the HBA LEDs, simplifying their identification within server racks.

  - Environmental monitoring feature helps to optimize SAN availability.

Management Features

· Emulex's automated installation facilities and extensive management capabilities speed HBA deployment and device management, while reducing administration costs and protecting IT investment.

· Emulex LightPulse HBA management capabilities enable secure, centralized discovery, monitoring, reporting, and administration of Emulex HBAs on local and remote hosts. Powerful automation capabilities facilitate remote driver parameter, firmware and boot code upgrades. Advanced diagnostic features such as HBA beaconing and HBA statistics help to optimize management and network performance while the environmental monitoring feature helps to maintain optimum host to fabric connections. In addition to the GUI interface, management functions can also be performed via a scriptable Command Line Interface (CLI) as well as a web browser. With in-band and out-of-band management capabilities, Emulex provides data center administrators with the greatest level of management flexibility.

· Automated installation and configuration of driver and management tools simplifies deployment of multiple HBAs for Windows environments. A single installation of drivers and management utilities eliminates multiple reboots and ensures that each component is installed correctly and the HBA is ready to use.

· Emulex's management instrumentation complies to Open Management Standards, such as SMI-S and common HBA API support, which enables seamless upward integration into enterprise storage and server management solutions.

RoHS 2002/95/EC
COMPLIANT

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